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EXAMINER	
WANG, JIN CHENG	

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/782,879	KANG, JUNG YONG	
	Examiner	Art Unit	
	Jin-Cheng Wang	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6,7,10,12,13,15 and 16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-4, 6-7, 10, 12-13 and 15-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on 4/20/2007 has been entered. Claims 1 and 10 have been amended. Claims 2, 5, 8-9, 11, 14 and 17-18 have been canceled. Claims 1, 3-4, 6-7, 10, 12-13 and 15-16 are pending in the application.

Response to Arguments

Applicant's arguments filed April 20, 2007 have been fully considered but are moot in view of the new ground(s) of rejection and the §112 rejection set forth in the present Office Action.

Claims 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claim 1 recites the claim limitation "additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value, and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". Since the second resolution value is less than the first resolution value, the graphic image having the first resolution value cannot be fully displayed within the valid screen size having the second resolution value (See step (e) of claim

recites "excluding part of a rear end of the graphic image from a valid display period). Although "reconfiguring the graphic image" has been recited in step (d) following the steps (a) and (b), however, the claim limitation "the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". The size of the graphic image is controlled by the first resolution value corresponding first horizontal and vertical resolution values.

As addressed below, Iida discloses the claim limitation of "shifting a start point of the graphic image controlled by the second horizontal and vertical resolution values selected at the step (b) to within a valid display period contained between horizontal sync signals and excluding part of a rear end of the graphic image from a valid display period such that a number of pixels of the graphic image in a horizontal direction is reduced and a number of lines of the graphic image in a vertical direction is reduced" (Iida Figs. 2A-2C and column 5-6).

Iida discloses shifting a start point of the graphic image controlled by the SVGA standard which has a resolution lower than that of the XGA standard. Thus, image signals are written to the display area 36 in Fig. 2B within the screen 31 including pixels 32 with 600 rows and 800 columns appropriate for the resolution of the SVGA standard. A black signal is written to the pixels 32 belonging to the blank area 37 which is other than this display area 36.

Iida discloses in Fig. 2C that the timing generator 2 causes a part of the transferring stage included in the vertical scanning circuit 33 of the display panel 3 to simultaneously operate during the vertical blanking period of the image signals in order to collectively write a black signal to the rows of the pixels included in the upper-side and lower-side portions of the blank area 37. With respect to each intermediate row between the upper-side rows and the lower-side

rows, a black signal and image signals are written in sequence to each pixel in a normal transfer operation. A black signal independent of the image signals is supplied to the left and right sides belonging to the blank area 37 and at the same time the image signals are supplied to the display area 36 and the black signal and the image signals are written in sequence simultaneously to these areas in accordance with a normal transfer operation (See Fig. 5). Thus, a start point of the image signals having the resolution 1024*768 is shifted (Figs. 2B-2C). Iida discloses in column 5 a vertical start signal and a horizontal start signal relating to the claim subject matter of "a start point...between horizontal sync signals". The excluding part of the graphic image is the black area 37 including the part of a rear end of the graphic image from a valid display period (See Figs. 2B-2C) so that a number of pixels of the graphic image in a horizontal direction is reduced and a number of lines of the graphic image in a vertical direction is reduced (See Figs. 2B-2C, 5 and column 5-6).

Iida further discloses a method for controlling a resolution of a graphic image, comprising the steps of:

(a) Selecting a first resolution value of the graphic image to be displayed on an external display unit, said first resolution value corresponding to first horizontal and vertical resolution values (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(b) Additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value, and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image

controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(c) Confirming a source type of the graphic image (XGA format, SVGA, VGA, etc of Figs. 2A-2C) to be displayed on the external display unit and a screen mode (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(d) Referring to the selected first and second resolution values and reconfiguring the graphic image (*e.g., Figs. 2A-2C, 5 and column 5-6*).

Wherein if the source type of the confirmed graphic image is a source type other than a video or broadcast image or is a video or broadcast image based on a screen mode other than a full screen mode (Figs. 2B-2C), the processing unit refers to the first and second resolution values, and if the source type of the confirmed graphic image is a video or broadcast image based on a full screen mode (Fig. 2A), the processing unit refers only to the first resolution value (*e.g., Figs. 2A-2C, 5 and column 5-6*).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-7, 10, 12-13, 15-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claim 1 recites the claim limitation "additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value, and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". Since the second resolution value is less than the first resolution value, the graphic image having the first resolution value cannot be fully displayed within the valid screen size having the second resolution value (See step (e) of claim recites "excluding part of a rear end of the graphic image from a valid display period). Although "reconfiguring the graphic image" has been recited in step (d) following the steps (a) and (b), however, the claim limitation "the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". The size of the graphic image is controlled by the first resolution value corresponding first horizontal and vertical resolution values. Claims 3-4 and 6-7 depend upon the claim 1 and are rejected due to their dependency on the claim 1.

The claim 10 is subject to the same rationale of rejection set forth in the claim 1.

The claims 12-13 and 15-16 depend upon the claim 10 and are rejected due to their dependency on the claim 10.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4, 6-7, 10, 12-13 and 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim 1 recites the claim limitation "additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value, and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". Since the second resolution value is less than the first resolution value, the graphic image having the first resolution value cannot be fully displayed within the valid screen size having the second resolution value. Although "reconfiguring the graphic image" has been recited in step (d) following the steps (a) and (b), however, the claim limitation "the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size". The size of the graphic image is controlled by the first resolution value corresponding first horizontal and vertical resolution values. Clarification is required.

Claim 1 also set forth the claim limitation of "second resolution value" and "first resolution value" and the claim 2 set forth the claim limitation "the first and second resolution values are horizontal and vertical resolution values". However, applicant refers to the resolution values such as "720 x 480" pixels (See line 22, Page 6 of applicant's specification). From the claim limitation set forth in these claims, it is not clear whether "first resolution value" refers to just one value or two values for the horizontal and vertical resolution values. It is further not

clear whether "second resolution value" refers to just one value or two values for the horizontal and vertical resolution values. Similarly comments apply to the dependent claims 3-7 and 9. Clarification is required.

Claims 3-4 and 6-7 depend upon the claim 1 and are rejected due to their dependency on the claim 1.

The claim 10 is subject to the same rationale of rejection set forth in the claim 1.

The claims 12-13 and 15-16 depend upon the claim 10 and are rejected due to their dependency on the claim 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4, 6-7 and 10, 12-13, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grigor et al. U.S. Patent No. 6,618,026 (hereinafter Grigor) in view of Hodgkinson, "Dynamic Adjustment of on Screen graphic displays to cope with different video display and/or display screen formats", US Patent Pub. No. US 2002/0089523 A1 (hereinafter Hodgkinson) and Iida et al. U.S. Patent No. 6,236,388 (hereinafter Iida).

Re Claims 1 and 10:

Grigor discloses a method for controlling a resolution of a graphic image, comprising the steps of:

(a) Selecting a first resolution value of the graphic image to be displayed on an external display unit, said first resolution value corresponding to first horizontal and vertical resolution values (*e.g., obtain a drawing surface setting; Figs 3-4; column 4, lines 38-60; for example, the first resolution value is the resolution 1024*768 associated with the initial drawing surface.*);

(b) additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value, and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size (*e.g., see 112 rejection set forth above. Moreover, the processing module alters one or more of the parameters including the resolution to generate an alternative drawing surface wherein the alternative drawing surface has the second resolution value modified to match a valid screen of the TV. For example, the second resolution is 720*540; see column 4, lines 40-60*);

(c) Confirming a source type (*e.g., a drawing surface setting of the plurality of the drawing surface settings including a resolution of 1024*768, 720 *540, 640 *480, etc.; column 4, lines 38-60*) of the graphic image to be displayed on the external display unit and a screen mode (*e.g., Moreover, the cited reference teaches determining whether each of the multiple displays includes a display mode that substantially matches the alternate drawing surface setting wherein the determination involves the selection of the resolution type for each display that*

substantially matches the alternate drawing surface setting; see Figs. 1-4; column 1, lines 55-60 wherein Fig. 2 lists a set of resolution values for each display. Selecting/determining a display mode for each display also selects/determines a resolution value corresponding to a valid screen of each display; see also column 5-6. The cited reference teaches asking if there is a match between the source resolution of the drawing surface settings and a screen mode or display mode of each of multiple displays listed in Fig. 2 that matches the selected second resolution; see Figs. 3-4 and column 5-6; "asking whether all of the resolution options have been utilized as the alternative drawing surface setting in step 64 of Fig. 3 and asking whether each of the multiple displays includes a display mode that substantially matches the newly generated alternate drawing surface setting in step 60 of Fig. 3, if there is a match, provide the images stored in the drawing surface to the multiple displays based on the drawing surface setting in step 56 of Fig. 3. Note that the screen mode refers to a display mode with a variety of display resolutions listed in Fig. 2 or ***the final display mode for the image such as full screen mode or in a window display mode; see column 5, lines 34-37***);

(d) Referring to the selected first and second resolution values and reconfiguring the graphic image (*Referring to the plurality of the drawing surface settings including the initial drawing setting and the current drawing setting wherein the initial drawing setting has a first resolution value and the current drawing setting has the second resolution value. The first resolution value does not match with the display mode and the second resolution value may match with the display mode. If the current resolution value matches the display mode, the graphic image is reconfigured to be displayed. Each display would reconfigure based on the drawing surface settings to display the image in full screen or in a window as established by the*

drawing surface; column 5, lines 34-37), according to a result of the configuration according to the determination in the step (c); see Fig. 3).

Wherein if the source type of the confirmed graphic image is a source type other than a video or broadcast image or is a video or broadcast image based on a screen mode other than a full screen mode, the processing unit refers to the first and second resolution values, and if the source type of the confirmed graphic image is a video or broadcast image or is a video or broadcast image based on a full screen mode, the processing unit refers only to the first resolution value.

Grigor discloses selecting a first resolution value of the graphic image to be displayed on an external display unit wherein Grigor teaches obtaining a drawing surface setting (Figs 3-4; column 4, lines 38-60) that includes the first resolution value such as the resolution 1024*768 associated with the initial drawing surface. It is understood that if there is a match between the graphic image to be displayed and the initial drawing surface setting, the graphic image is displayed in full screen mode.

Grigor discloses additionally selecting a second resolution value corresponding to a valid screen of the external display unit, said second resolution value being less than the first resolution value wherein Grigor teaches that the processing module alters one or more of the parameters including the horizontal and vertical resolutions to generate an alternative drawing surface such that the second resolution value is modified to match a valid screen size of the TV. For example, the second resolution is 720*540 (see column 4, lines 40-60).

Grigor discloses confirming a source type wherein the source type means the graphic image having different resolutions and refresh rate, e.g., the graphic image having a drawing

surface setting including a resolution of 1024*768, 720 *540, 640 *480, etc. (column 4, lines 38-60). Grigor teaches a screen mode wherein he teaches determining whether each of the multiple displays includes a display mode that substantially matches the alternate drawing surface setting and the determination involves the selection of the resolution type for each display that substantially matches the alternate drawing surface setting (see Figs. 1-4; column 1, lines 55-60) in which Fig. 2 lists a set of resolution values for each display. He teaches asking if there is a match between the source resolution of the drawing surface settings and a screen mode or display mode of each of multiple displays listed in Fig. 2 that matches the selected second resolution; see Figs. 3-4 and column 5-6. He further teaches asking whether all of the resolution options have been utilized as the alternative drawing surface setting in step 64 of Fig. 3 and asking whether each of the multiple displays includes a display mode that substantially matches the newly generated alternate drawing surface setting in step 60 of Fig. 3. If there is a match, provide the images stored in the drawing surface to the multiple displays based on the drawing surface setting in step 56 of Fig. 3. Note that the screen mode refers to a display mode with a variety of display resolutions listed in Fig. 2 or the final display mode for the image such as full screen mode or in a window display mode; see column 5, lines 34-37. Grigor therefore teaches referring to both the first resolution value (full screen mode) and the second resolution value (partial screen mode).

Grigor teaches referring to the plurality of the drawing surface settings including the initial drawing setting and the current drawing setting wherein the initial drawing setting has a first resolution value and the current drawing setting has the second resolution value. The first resolution value may match the display mode and thus only the first resolution value is referred

to. Otherwise, the first resolution value does not match with the display mode and the second resolution value may match with the display mode. If the current resolution value matches the display mode, the graphic image is reconfigured. Each display would reconfigure based on the drawing surface settings to display the image in full screen or in a window as established by the drawing surface (column 5, lines 34-37).

Thus, Grigor teaches the claim limitation if the source type of the confirmed graphic image is a source type other than a video or broadcast image or is a video or broadcast image based on a screen mode other than a full screen mode, the processing unit refers to the first and second resolution values, and if the source type of the confirmed graphic image is a video or broadcast image or is a video or broadcast image based on a full screen mode, the processing unit refers only to the first resolution value.

Although Grigor does not explicitly teach "a valid screen size of the external display unit", Hodgkinson explicitly discloses a valid screen size of the external display unit. For example, Hodgkinson discloses in Page 3-4 the shape and size of the display screen and the switching to the different aspect ratio (switching from one display mode to another display mode) by adjusting the height or width of the graphics image. However, if the graphic image fits into the display resolution, it is not necessary for adjusting the height or width of the graphics image. Hodgkinson discloses that the graphics display can be modified to take into account changes in the formats of the video display with respect to the display screen format and web pages can be reformatted to fit the new available display width. If the pixel aspect ratio has changed, the graphic display is rescaled. Hodgkinson further discloses in Page 2 a full screen option for displaying the graphic image by adjusting the format for the graphic image and **asking**

the display screen to change dynamically into a different display mode for the graphics image. In this fashion, the full screen resolution and the partial screen resolution are referred to if there is no match between the graphics image and the display screen resolution.

Thus, Hodgkinson also teaches the claim limitation if the source type of the confirmed graphic image is a source type other than a video or broadcast image or is a video or broadcast image based on a screen mode other than a full screen mode, the processing unit refers to the first and second resolution values, and if the source type of the confirmed graphic image is a video or broadcast image or is a video or broadcast image based on a full screen mode, the processing unit refers only to the first resolution value.

It would have been obvious to one of the ordinary skill in the art at the time of the invention was made to have incorporated Hodgkinson's invention into Grigor because **Hodgkinson also teaches other claim limitations including confirming a source type on the graphic image to be displayed on the external display unit such as a television and a screen mode such as a full screen mode or a partial screen mode** and Grigor at least suggests the claim limitation of a valid screen size by teaching the main horizontal and vertical resolutions of a display screen and the sub horizontal and vertical resolutions of a display screen which are less than the main horizontal and vertical resolutions of a display screen so that the graphics image can be fitted into the display device. Thus, having the combined teaching of Grigor and Hodgkinson, one of the ordinary skill in the art would have been motivated to cause the graphic display to be altered with respect to the format such that it is visible and in a preferred form (See Hodgkinson Abstract).

It is not clear whether Grigor and Hodgkinson teach the claim limitation of "shifting a start point of the graphic image controlled by the second horizontal and vertical resolution values selected at the step (b) to within a valid display period contained between horizontal sync signals and excluding part of a rear end of the graphic image from a valid display period such that a number of pixels of the graphic image in a horizontal direction is reduced and a number of lines of the graphic image in a vertical direction is reduced".

However, Iida discloses the claim limitation of "shifting a start point of the graphic image controlled by the second horizontal and vertical resolution values selected at the step (b) to within a valid display period contained between horizontal sync signals and excluding part of a rear end of the graphic image from a valid display period such that a number of pixels of the graphic image in a horizontal direction is reduced and a number of lines of the graphic image in a vertical direction is reduced" (Iida Figs. 2A-2C and column 5-6).

Iida discloses shifting a start point of the graphic image controlled by the SVGA standard which has a resolution lower than that of the XGA standard. Thus, image signals are written to the display area 36 in Fig. 2B within the screen 31 including pixels 32 with 600 rows and 800 columns appropriate for the resolution of the SVGA standard. A black signal is written to the pixels 32 belonging to the blank area 37 which is other than this display area 36.

Iida discloses in Fig. 2C that the timing generator 2 causes a part of the transferring stage included in the vertical scanning circuit 33 of the display panel 3 to simultaneously operate during the vertical blanking period of the image signals in order to collectively write a black signal to the rows of the pixels included in the upper-side and lower-side portions of the blank area 37. With respect to each intermediate row between the upper-side rows and the lower-side

rows, a black signal and image signals are written in sequence to each pixel in a normal transfer operation. A black signal independent of the image signals is supplied to the left and right sides belonging to the blank area 37 and at the same time the image signals are supplied to the display area 36 and the black signal and the image signals are written in sequence simultaneously to these areas in accordance with a normal transfer operation (See Fig. 5). Thus, a start point of the image signals having the resolution 1024*768 is shifted (Figs. 2B-2C). Iida discloses in column 5 a vertical start signal and a horizontal start signal relating to the claim subject matter of "a start point...between horizontal sync signals". The excluding part of the graphic image is the black area 37 including the part of a rear end of the graphic image from a valid display period (See Figs. 2B-2C) so that a number of pixels of the graphic image in a horizontal direction is reduced and a number of lines of the graphic image in a vertical direction is reduced (See Figs. 2B-2C, 5 and column 5-6).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was made to have incorporated Iida's invention into Hodgkinson and Grigor because Iida further discloses a method for controlling a resolution of a graphic image, comprising the steps of:

(a) Selecting a first resolution value of the graphic image to be displayed on an external display unit, said first resolution value corresponding to first horizontal and vertical resolution values (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(b) Additionally selecting a second resolution value corresponding to a valid screen size of the external display unit, said second resolution value being less than the first resolution value,

and said second resolution value corresponding to second horizontal and vertical resolution values corresponding to a valid horizontal and vertical frequency so that the graphic image controlled by the first resolution value selected at the step (a) is fully displayed within the valid screen size (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(c) Confirming a source type of the graphic image (XGA format, SVGA, VGA, etc of Figs. 2A-2C) to be displayed on the external display unit and a screen mode (*e.g., Figs. 2A-2C, 5 and column 5-6*);

(d) Referring to the selected first and second resolution values and reconfiguring the graphic image (*e.g., Figs. 2A-2C, 5 and column 5-6*).

Wherein if the source type of the confirmed graphic image is a source type other than a video or broadcast image or is a video or broadcast image based on a screen mode other than a full screen mode (Figs. 2B-2C), the processing unit refers to the first and second resolution values, and if the source type of the confirmed graphic image is a video or broadcast image based on a full screen mode (Fig. 2A), the processing unit refers only to the first resolution value (*e.g., Figs. 2A-2C, 5 and column 5-6*).

Although Grigor and Hodgkinson are silent to the claim limitation of shifting a start point of the graphic image controlled by the horizontal and vertical resolution value selected at the step (b) to within a valid display period contained between horizontal sync signals, Grigor implicitly discloses shifting a start point of the graphic image controlled by the horizontal and vertical resolution value selected at the step (b) to within a valid display period contained between horizontal sync signals by modifying the refresh rate and the horizontal and vertical resolution *(column 5-6)*.

It would have been obvious to have incorporated Iida's changing/shifting the display position coordinates of the images into Grigor and Hodgkinson's method because Grigor suggests modifying the display resolution of the graphic image to suit a particular display's resolution and thereby displaying the graphic image in full screen mode or a window mode such that the displayed graphic image is shifted to within the valid display period (Grigor column 5, lines 34-37) and therefore suggesting an obvious modification.

One of the ordinary skill in the art would have been motivated to modifying the display coordinate positions to display a graphic image within the valid display area (Grigor column 5, lines 34-37, Hodgkinson Paragraph 0038, 0047 and Iida Figs. 2A-2C, Fig. 5 and column 5-6).

Re Claims 3 and 12:

Grigor further discloses the claim limitation of the external display unit being a television (*column 2, lines 60-63 discloses the plurality of displays 24-30 may be a computer monitor, flat panel screen, high definition television, a television, LCD panel and/or any device that displays images*).

Re Claims 4 and 13:

Grigor further discloses selecting any one of a plurality of first horizontal and vertical resolution values corresponding to horizontal and vertical frequencies capable of being accommodated in the TV (*e.g., modifying the resolution; column 4, lines 40-60; column 5, lines 39-41; and altering one or more parameter of the drawing surface settings; column 3, lines 50-55 and the parameters include the horizontal and vertical resolution values; column 4, lines 38-60*).

Re Claims 6 and 15:

Grigor further discloses a full screen mode (*the first resolution of the graphic image may be the resolution that most closely matches the drawing surface setting; column 5; and this first resolution is controlled/selected by the program. The screen mode is the display mode of the cited reference which matches the selected resolution, column 5, lines 34-37. If a match does not occurs, the resolution parameter is modified so that a match can be found*) and the source type being a video image (column 3, lines 30-45).

Re Claims 7 and 16:

Grigor further discloses the video image being a video image received from a television broadcast, cable broadcast, satellite broadcast, DVD player, VCR and/or camcorder (*column 3, lines 30-45*).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw Jincheng Wang